

REMARKS

In the Office Action, the Examiner rejected all of the claims as being anticipated by Desor (US 20020031160). Although applicants do not agree with this rejection, claims 1-49 have been cancelled. New claims 50 to 63 are presented in this amendment for consideration.

New claims 50 to 63 are directed to real time compensation of jitter between the output pulses of two discharges, such as a master oscillator and power amplifier. The subject matter of the new claims is disclosed in the portion of the specification entitled "Real-Time Compensation" beginning on page 17, line 10 and in conjunction with Figures 9 to 15.

As disclosed therein, one method to help stabilize the delay between the generation of output pulses from two discharges is to use a feedback loop. For example, photodiodes can be used to monitor the generation of the output pulses and variations in the timing can be used as an error signal to control the subsequent firings of the excitation circuit to minimize these variations (jitter). The errors being corrected are associated with slow changes to the laser system caused, for example, by temperature.

In order to control jitter to the sub-nanosecond level, real time, pulse to pulse control is needed. In the subject approach, variations occurring while the excitation pulses are being generated are monitored. For example, the voltage on the main charging capacitor can be monitored and to the extent that this level varies, an error signal can be generated to vary the delay between the trigger signals applied to the oscillator and the amplifier. This open loop correction is immediately applied to the excitation circuit on a pulse-to-pulse basis. This fast correction approach can be combined with a feedback loop which monitors the actual delay between output pulses and uses the error signal to modify the delay between the next set of triggers.

It is respectfully submitted that none of the prior art of record anticipates or renders obvious the subject matter of new claims 50 to 63 and allowance thereof is respectfully requested.

Respectfully submitted,

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